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THE
ONTARIO WATER RESOURCES
COMMISSION

WATER POLLUTION SURVEY

of the

COMMUNITY OF WASHAGO

TOWNSHIP OF ORILLIA

1970

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REPORT

ON A

WATER POLLUTION SURVEY

OF THE

COMMUNITY OF WASHAGO

Township of Orillia

July, 1970

District Engineers Branch
Division of Sanitary Engineering

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TOWNSHIP OF ORILLIA

COMMUNITY OF WASHAGO

WATER POLLUTION SURVEY

INTRODUCTION

The Ontario Water Resources Commission was requested to perform a water pollution survey in the Community of Washago by the Township of Orillia. Field work for this survey was done during May and July, 1970.

GENERAL

The Community of Washago is located in the north-east portion of the Township of Orillia on Highway 69 at the north end of Lake Couchiching. The population of Washago is estimated at less than 200. Washago is supported by the Canadian National Railroad and a saw mill as well as the tourist industry. Drainage of the community is by open ditches which eventually discharge to branches of the Severn River.

Exposed bedrock is prevalent in Washago as are swampy depressions.

WATER USES

The Community of Washago utilizes water from the Severn River which is chlorinated and pumped to the distribution

system. The system was formerly owned by the CNR and is now owned by the Township of Orillia but operated by a water committee in Washago.

The rivers in the area are used for fishing, swimming, and boating.

WATER POLLUTION

Most of the community is built on exposed bedrock. Sewage disposal is by septic tank and sub-surface tile fields.

It has been reported that many of the residents know that their septic tank and tile fields are inadequate but are reluctant to make any necessary repairs as they are hoping that the area will be sewered in the near future.

Many of the areas within the community are low and wet. An area at the end of Washago Park Road is one such low area with poor drainage. During the second sample run (July 16, 1970) it was raining and the sample taken from this area designated as W-7 indicated possible flooding of the tile field. It was also noted that these cottages were built on small lots.

A similar situation exists at the end of River Wharf where the sample taken from a ditch draining a low, wet area and designated as W-14 was adverse during the second sample run.

Adverse samples were also collected from a low wet area near Albany Street. It would appear that these adverse samples are resulting from malfunctioning septic tanks and tile fields since the houses are built on bedrock which falls to a low wet area.

The samples collected from the ditches along Community Hall Road, designated as W-20 and W-27 were also adverse. Small red worms were noted in the south ditch at the end of the road. These worms are indicative of the decomposition of organic matter. The presence of these worms and the high fecal coliform count would tend to indicate that sewage is gaining access to the ditch.

The buildings on the east side of Muskoka Street, north of Hamilton Street are built on bedrock which fall to the east. The samples collected from the ditch behind these buildings indicate the possibility of malfunctioning septic tanks and tile fields in this area.

An adverse sample collected from the ditch on the south side of Highway 69, east of Muskoka Street, indicated the presence of sewage. It appears as if this problem occurs because of a discharge from a private drain owned by the house on the corner of the above-mentioned streets.

DISCUSSION

As sample results indicate, sewage is ponding in certain areas and gaining access to the ditches. The topography of the area does not readily lend itself to the use of septic tanks and tile fields for sewage disposal. In some areas poor drainage and low land apparently results in flooding of tile beds.

Unfortunately eliminating malfunctioning septic tanks and tile beds by a sewage works and collection system would not be an easy task. Because of the exposed bedrock, the installation of sewers would be expensive.

One alternative does appear possible, that is the correction of inadequate systems by the individual. This type of program requires the participation of the Township of Orillia and the Simcoe County Health Unit. The Health Unit would be involved in seeing that the inadequate systems were reconstructed or repaired so as to meet its requirements. The Township's involvement should include a program of improved drainage to correct and prevent future ponding of tile fields.

The possibility of much additional development on septic tank and tile field installation is severely limited due to poor soil conditions. The wisdom of developing a sewerage system in this rock area would be questionable. Both these points tend to indicate future development should not occur in the area.

SUMMARY

Problems do exist with some septic tanks and tile fields due to the topography of the land. The rocky nature of the land, however, would likely make a sewage works impractical from the point of view of average annual cost per homeowner.

RECOMMENDATIONS

1. Septic tanks and tile fields should be corrected on an individual basis under the close supervision of the Simcoe County District Health Unit.
2. Where possible the Township should try to improve the drainage patterns within the Community to alleviate flooding and ponding of tile fields.
3. The Land Use and Community Plan of the Official Plan of the Couchiching Planning Area should be amended to restrict further growth within Washago due to the problems encountered with present sewage disposal facilities.

Prepared by:

J.F. Orgill,
District Engineers Branch,
Division of Sanitary Engineering.

APPENDICES

GLOSSARY OF TERMS

Bacteriological Examinations - The Membrane Filter technique is used to obtain a direct enumeration of coliform organisms. These organisms are the normal inhabitants of the intestines of man and other warm-blooded animals. They are always present in large number in sewage and are, in general, relatively few in number in other stream pollutants. The results are reported as MF coliform count per 100 millilitres.

Biochemical Oxygen Demand (BOD) - The BOD test indicates the amount of oxygen required for stabilization of the decomposable organic matter found in the sewage, sewage effluent, polluted waters or industrial wastes by aerobic biochemical action. The time and temperature used are 5 days and 20^{o}C respectively.

Solids - The analyses for solids include tests for total, suspended and dissolved solids. The former measures both the solids in solution and in suspension. Suspended solids indicate the measure of undissolved solids of organic or inorganic nature, whereas the dissolved solids are a measure of those solids in solution.

TOWNSHIP OF ORILLIA

WASHAGO WATER POLLUTION SURVEY

LOCATION	DATE	BOD	SOLIDS			COLIFORM	
			TOTAL	SUSP.	DISS.	FECAL	TOTAL
W-1 Trent Canal & Hwy. 11	May 20	1.4	220	5	215	4	8
W-2 Swamp Hwy. 11 & 69	May 20	1.0	390	5	385	120	144
W-3 Swamp on Hwy. 69 west of Washago	May 20	3.0	480	5	475	100	2000
	July 16	2.5	810	5	805	790	8500
W-4 Culvert west of CN Station	May 20					< 4	140
	July 16	1.0	620	5	615	< 4	32
W-5 Swamp halfway down Washago Park Road	May 20	1.0	440	5	435	< 4	< 4
W-6 Lake at Washago Park	May 20	1.2	200	5	195	< 4	4
	July 16	1.0	180	5	175	< 4	384
W-7 Swamp by cottage on Washago Park Rd.	May 20	2.5	280	5	275	4	48
	July 16	4.5	350	5	345	576	17100
W-8 Ditch corner of Hwy. 69 & Muskoka Street	May 20	4.5	1480	20	1460	20	160
	July 16	1.4	1000	10	990	424	6800
W-9 River end of Muskoka Street	May 20	1.2	200	5	195	< 4	< 4

LOCATION	DATE	BOD	SOLIDS			COLIFORM	
			TOTAL	SUSP.	DISS.	FECAL	TOTAL
W-10 Bridge at entrance of Hamilton Street	May 20	1.0	200	5	195	<4	16
W-11 Ditch leading to River from River Wharf	May 20	1.4	580	5	575	2200	5000
	July 16	0.8	500	5	495	352	10200
W-12 River at end of Albany Street	May 20	4.0	210	5	205	120	124
	July 16	1.2	210	5	205	300	1200
W-13 Ditch north side of River Wharf	May 20	3.0	480	10	470	<4	4
	July 16	0.6	510	5	505	228	4400
W-14 Swamp at end of River Wharf	May 20	3.0	350	10	240	<4	156
	July 16	4.0	420	20	400	400	3800
W-15 Bridge north of Washago	May 20	1.6	210	5	205	<4	4
W-16 Wet Area Muskoka & Albany	May 20					8	36
	July 16	3.0				4200	10000
W-17 Culvert half down Albany	May 20	3.0	260	10	250	<100	100
	July 16	1.4	290	10	280	268	530
W-18 Ditch south of Albany behind houses	May 20					615000	160000
W-19 Wet Area behind hotel	May 20					<4	10

LOCATION	DATE	BOD	SOLIDS			COLIFORM	
			TOTAL	SUSP.	DISS.	FECAL	TOTAL
W-20 Culvert at bend on Community Hall Road	May 20	4.0	290	10	280	6000	118000
	July 16	4.0	370	25	345	14000	144000
W-21 Swamp behind Albany	May 20	1.0	310	10	300	< 4	44
W-22 Pond behind School	May 20	2.5	280	5	275	28	30
W-23 Creek Hwy. 11 north of Washago	May 20	1.2	240	5	235	20	20
	July 16	2.5	420	5	415	112	600
W-24 Ditch south of Hwy. 69 east of Muskoka	May 20					81000	310000
	July 16	1.2	210	5	205	100	1000
W-25 Severn River at Hwy. 69	May 20	1.8	190	5	185	56	70
	July 16	0.8	180	5	175	32	284
W-26 Ditch beside Blacksmith Shop	July 16	2.5	630	5	625	312	4000
W-27 Ditch north side of Community Hall Road	July 16	7.0	360	10	35	20000	250000

CANADIAN

W-15

RIVER

SEVERN

NATIONAL

HWY Nº11 & Nº69

ORILLIA ISLAND

RAILWAY

W-22

W-23

SEVERN

W-2

W-13

W-14

W-16

W-18

ALBANY ST.

SWAMP AREA

W-21

W-17

W-12

W-27

WHARF

W-11

COMMUNITY HALL

RD.

W-20

HAMILTON ST.

W-10

W-19

RIVER

ST.

W-26

HWY. Nº 69 (RAMA ST.)

W-8

W-24

W-25

W-4

RD.

PARK

MUSKOKA

W-9

W-5

WASHAGO

W-6

RAMA ISLAND

CANADIAN

DAM

NATIONAL

RAILWAY

HWY Nº 69

W-3

W-1

TRENT CANAL

HWY Nº 11

PUBLIC WHARF

SWAMP AREA

W-7

C. N. R.

LITTLE FALLS ISLAND

DAM

LEGEND

W-21 – SAMPLING POINT

– MARSHY AREA

ONTARIO WATER RESOURCES COMMISSION

COMMUNITY OF WASHAGO
TWP. OF ORILLIA
WATER POLLUTION SURVEY
1970

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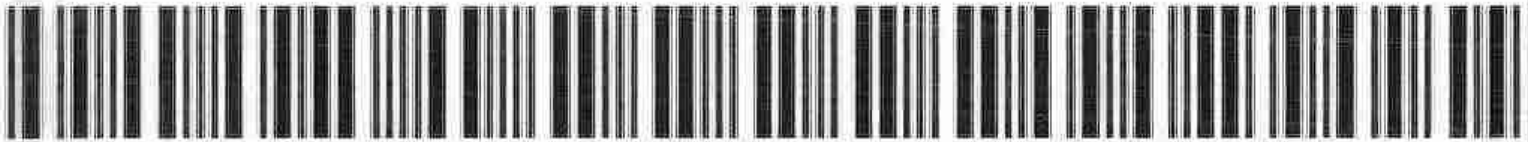
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